WHAT IS CLAIMED IS:

1. A method for acquiring ultrasound data, comprising:

acquiring echo signals from an area of interest;

analyzing said echo signals to produce a first data stream associated with a first receive beam; and

decimating said first data stream by passing at least two consecutive data samples and by removing at least two other data samples therefrom to form a first decimated data stream.

2. The method of claim 1, further comprising:

analyzing said echo signals to produce a second data stream associated with a second receive beam that is spatially different from said first receive beam; and

multiplexing said first and second data streams together.

3. The method of claim 1, further comprising:

analyzing said echo signals to produce a second data stream associated with a second receive beam that is spatially different from said first receive beam; and

decimating said second data stream by passing at least two consecutive data samples and by removing at least two other data samples therefrom to form a second decimated data stream.

4. The method of claim 1, further comprising:

analyzing said echo signals to produce a second data stream associated with a second receive beam that is spatially different from said first receive beam; and

decimating said second data stream to pass at least two consecutive data samples that align in time with said two other data samples removed from said first data stream.

5. The method of claim 1, further comprising repeating said analyzing and decimating steps for at least four data streams associated with four different receive beams.

6. An ultrasound system, comprising:

a transmitter for transmitting ultrasound signals into an area of interest;

a receiver for receiving echo signals from transmitted ultrasound signals;

a beamformer processing said echo signals to simultaneously form first and second data streams associated with different first and second receive beams, said beamformer including at least one decimator for removing data samples from said first and second data streams, said at least one decimator removing a different number of consecutive said data samples based on a band-pass mode; and

an output for outputting information based on an output of said decimator.

7. The ultrasound system of claim 6, wherein said beamformer further comprises a multiplexor for combining said first and second data streams.

8. The ultrasound system of claim 6, further comprising at least two processors receiving and dividing said echo signals from said receiver into said first and second data streams, said first and second receive beams differing spatially with respect to said receiver.

9. The ultrasound system of claim 6, further comprising an anti-aliasing filter passing data based on said band-pass mode, said band-pass mode being one of low-band, mid-band, and high-band.

10. The ultrasound system of claim 6, further comprising a system controller identifying said band-pass mode.

11. The ultrasound system of claim 6, further comprising said band-pass mode being one of low-band, mid-band, and high-band, said at least one decimator removing two consecutive said data samples when said band-pass mode is said mid-band, said at least one decimator removing every other said data sample when said band-pass mode is said high-band.

12. A demodulator for demodulating data streams, comprising:

an input receiving a data stream, said data stream comprising mid-band data;

a multiplier interleaving said data stream with a time dependent signal; and

a filter filtering said data stream, said filter outputting a filtered data stream.

13. The demodulator of claim 12, said data stream further comprising data pairs, said filter further comprising coefficients interleaved with zeros.

14. The demodulator of claim 12, said filter filtering said data stream with a coefficient set that is different for odd and even numbered time index.

15. The demodulator of claim 12, said data stream further comprising multiplexed mid-band data, said multiplexed mid-band data being interleaved every two consecutive data samples, said filter further comprising coefficients having two consecutive data samples representative of a desired impulse response interleaved with two consecutive data samples being zeros.

16. The demodulator of claim 12, said data stream having a first frequency, said filter outputting said filtered data stream at a sampling rate being one of equal to said first frequency and two times said first frequency.

17. A method for acquiring ultrasound data, comprising:

acquiring echo signals from an area of interest;

producing first and second data streams associated with first and second receive beams based on said echo signals, said first and second data streams having a total bandwidth;

filtering said first and second data streams to form first and second filtered data streams, said first and second filtered data streams having a bandwidth comprising one of a low-band, mid-band, and high-band, said low-band, mid-band, and high-band bands being based on said total bandwidth; and

decimating said first and second filtered data streams to form first and second decimated data streams.

18. The method of claim 17, further comprising multiplexing said first and second filtered data streams.

19. The method of claim 17, said first and second decimated data streams having a bandwidth of one-quarters to three-quarters of said total bandwidth.

20. The method of claim 17, said filtering step applying coefficients based on said bandwidth, said coefficients being different for each of said low-band, mid-band, and high-band bands.